Barriers to community participation for adults ageing with an intellectual disability in Ireland: a longitudinal study

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Abstract

Social inclusion is associated with better health and quality of life. Community participation is essential to inclusion and is an established human right. However, people with intellectual disability experience limitations and challenges to their participation. This study examined difficulties older Irish adults had participating in community. A sample of 609 individuals was followed over a six-year period to explore rates of difficulty experienced and associated factors. The proportion reporting the difficulties measured increased over time. Ageing was associated with increased difficulty participating in community but was just one of multiple factors. Contrary to policy, more adults with intellectual disability may face exclusion from community as they age. More person-centred supports are needed to address individual needs to better support inclusion.

Keywords: Intellectual disability, ageing, social inclusion, community participation

Introduction

Community participation of people with intellectual disability

Social inclusion is associated with physical health and mental well-being in both the general population (Holt-Lunstad et al., 2015; Ward et al., 2021) and among people with intellectual disability (McCausland, McCallion, et al., 2021; Wormald et al., 2019), and contributes to improved quality of life (McCrory et al., 2014; van Asselt-Goverts et al., 2015).

Alongside participating in interpersonal relationships, community participation is a core element of social inclusion for people with intellectual disabilities, including participation in leisure activities, such as hobbies, arts and sports; political and civic activities or organisations; productive activities, like employment or education; consumption or access to goods and services; and religious and cultural activities and groups (Simplican et al., 2015). Participation may be experienced as *presence* in a community setting, as *encounter* with strangers in community settings, or as *involvement* in community activities that promote deeper and more lasting interpersonal relationships (Simplican et al., 2015); a conceptual distinction which recognises the potential for a spectrum of 'community participation' in a variety of settings and situations.

Inclusion and participation in community is a right for people with intellectual disability (United Nations, 2006). However, the literature previously highlighted limited community participation for people with intellectual disabilities (Chowdhury & Benson, 2011; Robertson et al., 2001; Verdonschot et al., 2009a) and challenges to community participation for this population have persisted despite the advance of deinstitutionalisation and community living policies (Bredewold, 2021; Bredewold et al., 2020; McCarron et al., 2019; Merrells et al., 2019; Umb Carlsson, 2021).

Factors that may limit or facilitate community participation

The degree to which people with intellectual disability may participate in community varies according to their available opportunities and supports (Hall, 2017). Social support, in particular from family and friends, is critical to realising community participation (McCausland et al., 2018; Overmars-Marx et al., 2014; Verdonschot et al., 2009b). Support staff, service managers, organisational culture and limiting perceptions of inclusion, may reinforce the continued exclusion of people with intellectual disability, especially those with more severe disability (Abbott & McConkey, 2006; Clement & Bigby, 2009; Overmars-Marx et al., 2017). Personal factors, including interpersonal, navigation and other skills and knowledge and degree of intellectual disability, also influence experiences of community participation, although this may also be more related to inadequate supports than endemic personal characteristics (Abbott & McConkey, 2006; Hall, 2017; McCausland, Murphy, et al., 2021). Opportunities for choice-making and autonomy may also support greater potential for participation for individuals with intellectual disability (Verdonschot et al., 2009b).

Residential location and community characteristics were found to influence participation, including accessibility (physical and information) and available amenities, activities and supports (Abbott & McConkey, 2006; Hall, 2017). Attitudes and acceptance within community were also identified by some as a critical factor (Abbott & McConkey, 2006; Hall, 2017; Overmars-Marx et al., 2018; Verdonschot et al., 2009b). And several studies highlighted difficulties with access to and use of public and other transport options as a factor limiting participation for people with intellectual disability of all ages (Abbott & McConkey, 2006; Bezyak et al., 2020; Hall, 2017; McCausland et al., 2020; Verdonschot et al., 2009b).

In attempting to improve community participation, person-centred planning has the potential to overcome some of the barriers highlighted, although having the right supports in place is critical, especially for those with greater support needs (McCausland, Murphy, et al., 2021). A review by Bigby et al. (2018) found that intervention studies to promote community participation used person-centred approaches with strategies including active mentoring, facilitative support worker practice and arts-based programmes. A review of interventions to promote participation for adults with intellectual disability by Howarth et al. (2016) found that six of the eleven studies included had a positive effect, combining individual and group-based strategies.

Study aims

Within the context outlined above, the aim of this study was to explore the impact that ageing may have on community participation for adults with intellectual disability in Ireland. We examined barriers to participation and how these changed for a sample of this cohort who were followed over a six-year period. We examined rates and types of reported barriers and how these changed between data collection points; looked at differences based on key demographic variables; and explored factors associated with experiencing these barriers to community participation.

Methods

Changes in participant responses to questions on social participation and on the barriers experienced were examined at two time periods approximately six years apart. Ethical approval for the study was granted by [the host university].

Population & Procedures

Data was drawn from the first and third waves of the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA), a longitudinal cohort study of adults with intellectual disability in the Republic of Ireland aged 40 years and above. The Wave 1 sample of 753 consenting participants was randomly drawn from the National Intellectual Disability Database (NIDD) and interviewed in 2010-2011 using a combination of self-reported, supported and proxy interviews. The 609 participants remaining at Wave 3 data were interviewed in 2016-2017. A face-to-face computer assisted personal interview (CAPI) and a self-completed pre-interview questionnaire (PIQ) were completed. Table 1 provides a profile of the sample at Wave 1 and Wave 3. It shows an expected ageing of the sample over this period; however, there was relatively little change in residential setting, notably with just a 1% decrease in the proportion who were living in congregated as opposed to community settings.

TABLE 1 HERE

Under Irish policy, a congregated setting is considered as living arrangements for where 10 or more people share a single living unit or where the living arrangements are campus-based; while community group homes are dispersed dwellings in the community with fewer than 10 individuals (Health Service Executive, 2011; Linehan et al., 2015). In practice, community group homes in Ireland tend to house a maximum of 4-6 people, depending on the size of the dwelling.

Measures

The two principal questions used in the study are outlined in Table 2. Participants who responded 'yes' to experiencing difficulties participating in social activities outside their home (SP9) were then asked a follow-up question with structured responses to identify what difficulties they experienced. Similarly, participants who responded 'yes' to experiencing difficulty getting around their community (SP11) were asked a follow-up question, again with structured responses, to identify causes of difficulty.

TABLE 2 HERE

Analysis

Analysis was performed using SPSS v24. Wave 1 data utilised were for the 609 participants who also remained at Wave 3. Frequencies were run to identify proportions of respondents who reported difficulties and the causes of these difficulties. McNemar and Friedman tests were performed to test the significance of differences between Waves 1 and 3 ($p<0.05$). Bivariate associations between SP9 and SP11 and a range of socio-demographic variables were explored at Wave 3 using crosstabulations and chi-squared tests. Socio-demographic variables included: age (48-64 years; 65+ years); gender (male; female); level of intellectual disability (mild; moderate; severe-profound); residence type (congregated; community group home; independent/ family); self/proxy-rated health (good-excellent; fair-poor); self/proxy-rated mental health (good-excellent; fair-poor); self/proxy-reported frequency of contact with non-resident family (at least weekly; at least monthly; <monthly); self/proxy-reported having a best friend (yes; no); and self/proxy-reported sense of community belonging ('do you feel a part of your community?' yes; no). Logistic regression analyses were also performed using Wave 3 data to explore the association between these socio-

demographic factors and SP9 and SP11 as the dependent variables. Responses for SP11 were recoded as a binary outcome: (1) yes (yes; NA – don't travel around my community) and (2) no. The widely-accepted general rule of thumb to determine adequate power in the regression analyses ($N \geq 50 + 8m$, where m is the number of predictor variables) was followed (Green, 1991). Using this formula, our regression analyses with nine predictor variables would require a sample size of at least 112 (50 + 72) for adequate power. The sample included in each regression model was 456 and 455 respectively.

Results

Difficulty participating in social activities outside your home

The proportion of participants who had difficulty participating in social activities outside their home increased significantly from 49.1% in Wave 1 to 55.5% in Wave 3 (p=0.016). The most common causes of difficulty (Table 3) at both waves were needing assistance, health/physical ability, and communication/language problems, while a significant proportion also reported other difficulties not specified. Not being able to read signs and timetables, introduced in Wave 3, was also identified by 11% of all participants; and in both waves around 6% reported difficulty with inadequate or inaccessible transport.

TABLE 3 HERE

Table 4 shows the bivariate associations between reporting any difficulty with social activities outside the home and a range of socio-demographic factors at Wave 3. Significantly higher rates of difficulty were reported for participants aged 65+ years, females, participants with severe-profound intellectual disability, residents of congregated settings, participants with poorer physical

and mental health, those with the least frequent family contact, with no best friend and with no feeling of community belonging.

TABLE 4 HERE

A logistic regression was performed to further identify factors associated with having difficulty participating in social activities outside the home (Table 5). In the model, level of intellectual disability was the strongest predictor of this type of difficulty, whereby people with mild (OR 3.24) and moderate intellectual disability (OR 1.73) were less likely to have difficulty compared to those with severe-profound intellectual disability. Among other factors significantly associated with less reported difficulty were men were less likely to have difficulty than women (OR 1.97); people living in community group homes less likely to have difficulty than residents of congregated settings (OR 1.61); people who reported good-excellent mental health less likely to have difficulty than those who reported fair-poor mental health (OR 1.88); people with monthly family contact less likely to have difficulty than those with less frequent family contact (OR 2.11); and people who reported having a sense of community belonging were less likely to report difficulty than those with no sense of community belonging (OR 2.63).

TABLE 5HERE

Difficulty getting around your community

The proportion of participants who did not experience difficulty getting around their community remained constant between data collection points (Wave 1 = 40.0%; Wave 3 = 40.4%). However, the proportion of participants who did not travel around their community at all increased substantially in the six-year period, from 16.6% in Wave 1 to 27.3% in Wave 3; while there was a proportionate decrease of those who said they experienced difficulty getting around (Wave 1 =

43.4%; Wave 3 = 32.3%) ($p<0.001$). This suggests that approximately 11% of the sample who got around their community with difficulty at Wave 1 were unable to do so by Wave 3. The most common causes of this type of difficulty (Table 6) at both waves were footpath design and surfaces, and problems with signs; although higher proportions identified other unspecified difficulties at Wave 1 (19.7%) and Wave 3 (15.6%).

TABLE 6 HERE

Table 7 shows bivariate associations between reporting any difficulty getting around one's community and a range of socio-demographic variables at Wave 3. This shows significant differences for all variables apart from gender. Groups reporting the least difficulty included those with a sense of community belonging, with better physical and mental health, living in the community especially independently or with family, with mild intellectual disability, with frequent family contact, with a best friend, and those aged under 65 years. Participants who reported no sense of community belonging had the highest rates of not travelling around their community at all. Being aged over 65 years and less than good health were the characteristics most associated with not travelling around one's community.

TABLE 7 HERE

A logistic regression was performed to identify factors associated with having difficulty travelling around one's local community (in which responses of *'NA – don't travel around my community'* were recoded as having difficulty). In the model (Table 8), level of intellectual disability was again the strongest predictor of this type of difficulty, whereby people with mild intellectual disability (OR 4.85) were less likely to have difficulty getting around their local community compared with people with severe-profound intellectual disability. Other factors were significantly associated

with reporting less difficulty. People living independently or with family (OR 2.94) and in community group homes (OR 1.68) were less likely to have difficulty than residents of congregated settings. People with good-excellent rated physical health (OR 2.56) were less likely to have difficulty compared with those whose health was rated fair-poor. The younger cohort aged 48-64 years (OR 2.15) were less likely than those aged 65 year and above to have difficulty. And people who reported feeling a sense of community belonging (OR 2.10) were less likely to experience difficulty than those with no sense of community.

TABLE 8 HERE

Discussion

Given efforts in Ireland to both reduce reliance on congregated settings and to increase opportunities for community participation over the last decade, it would not be unreasonable to expect some improvement in overcoming barriers among individuals with intellectual disability followed up after six years. Our analysis of two different types of barriers to community participation for older adults with an intellectual disability in Ireland found instead that many continued to experience difficulty engaging in social activities outside their home and did not travel around their community at all. However, our analysis did identify several factors including modifiable factors that were significantly associated with experiences of these difficulties. Given these findings, service providers may consider further re-organising available supports to address the modifiable factors by more flexibly providing one-to-one or other assistance required by those who are either unable to get around their community at all or who do so with increasing difficulty due to failing health/ability and needing assistance. Similarly, individualised approaches that are reviewed periodically may help to identify changing needs and resources such as aids and devices that may be needed to support

continued engagement, which is especially important as people age and their health status is liable to change (McCausland, Murphy, et al., 2021).

For the sample as a whole, there was an increased proportion who had difficulty participating in social activities outside their house, which may be reflective of a general ageing effect in the six years between data collection points. The most common types of barriers highlighted by those who experienced difficulty, notably *'needs someone's assistance'* and *'health/physical ability'*, are also indicative of the recognised deterioration of health and independence for many with advancing age (Pearson-Stuttard et al., 2019; Singer et al., 2019). Nevertheless, in regression analysis, age was not a significant factor when other variables were controlled for, with no significant difference between the younger (48-64 years) and older (>65 years) age groups. This finding may suggest the interaction of other significant factors in the analysis proved more influential, and potentially modifiable – for example, ability (level of intellectual disability) and health (mental health) may have been mitigated by differences in support for community engagement available in different residential settings (community group homes) and by more available family supports (contact with family). The types of support more commonly found in community residences (McConkey et al., 2019) and greater availability of informal/family supports (Bigby, 2008; McCausland et al., 2018) have previously been highlighted as factors in supporting community participation. Here community placement alone may not be sufficient as needs change, therefore on-going and person-centred reorganisation of supports by providers may also be necessary.

Ageing as a factor was highlighted in the second analysis. The most common difficulty experienced by participants travelling around their community at Wave 1, *'footpath designs and*

surfaces', was again the most common six years later at Wave 3. In the regression analysis, age remained a significant factor when other variables were controlled for; with those aged 65 years and above more likely to have difficulty travelling around their community. Notably, the proportion of participants who had no difficulty travelling around their community remained constant at 40% over the six-year period. However, of concern was the finding that more than one in four participants (27.3%) did not travel around their community at all, which had increased from one in six participants (16.6%) at Wave 1. These findings indicate that the decreased mobility associated with age (Cleaver et al., 2009; McCarron et al., 2011) may be a growing source of difficulty for community participation. This suggests that policy goals of increased community participation for this population are not being realised as expected and must recognise increased difficulties as people age including reduced mobility and independence, and the increased supports needed to facilitate even their continued presence in the local community.

The analyses of both measures of difficulty highlighted the multi-factorial nature of how social inclusion and community participation, and barriers to them, are experienced among this population (Gauthier-Boudreault et al., 2019; McCausland et al., 2016; Simplican et al., 2015). Level of intellectual disability was strongly associated with both difficulties, supporting previous findings that individual ability is important in social and community participation (Dolva et al., 2019; Felce & Emerson, 2001; Friedman & Rizzolo, 2018; Gauthier-Boudreault et al., 2019; McCausland et al., 2018; McConkey et al., 2007; Robinson et al., 2018). However, how different aspects of individual ability impact on community participation is mediated and determined by the type and adequacy of supports in place to meet individual needs (Amado et al., 2013; Kozma et al., 2009; McCausland,

Murphy, et al., 2021; McVilly et al., 2006; Noonan Walsh et al., 2010; Overmars-Marx et al., 2017; Talman et al., 2019).

Residence was also independently associated with both measures of difficulty, with participants living in congregated settings more likely to experience these difficulties compared to those living in community settings (either independently, with family or in group homes). This also reflects previous findings of how community living in smaller residences is more supportive of community participation than residence in congregated or institutional settings (Emerson, 2004; Emerson & Hatton, 1996; McConkey et al., 2019; Noonan Walsh et al., 2007; Young et al., 1998). In the six-year follow-up the rate of transfers from congregate to community settings among this sample was very small, with just 1% fewer residing in non-community (congregated) settings; and this may have mitigated some of the improvements expected from a policy of deinstitutionalisation. However, even if transfers were minimal, additional policy emphasis on greater community participation would also have been expected to increase participation and reduce barriers/difficulties.

Other factors including gender, physical health, mental health, and family contact were also significantly associated with the difficulties analysed in the regression models. This, again, emphasises the multi-factorial nature of community participation, which is shown to depend on a variety of personal factors, environmental factors, and the supports available to individuals. It also highlights how such barriers may only be adequately addressed in an individualised manner using person-centred approaches (Bigby et al., 2018; Howarth et al., 2016; McCausland, Murphy, et al., 2021) and that policy emphasis on community living/deinstitutionalisation alone may not be sufficient to improve community participation.

Community belonging was also associated with both types of difficulty analysed, with participants reporting these barriers less likely to have feelings of belonging to their local communities. While it is not possible to say from the data whether a causal relationship exists, the association suggests that the impact of removing barriers to participation for this population is not only increased engagement in community, but potentially also the subjective feeling that they belong in their communities, which is critical to achieving participation beyond mere presence (Cummins & Lau, 2003). However, deeper community participation associated with lasting relationships and belonging may be nurtured from initial presence and encounter in community spaces (Bigby & Wiesel, 2019; Simplican et al., 2015) and therefore alleviating barriers to presence may be a valuable starting point. In a context where community participation has been challenged even further during the COVID-19 pandemic (Jeste et al., 2020; Murphy et al., 2020; Schuengel et al., 2020), it is more important than ever that people with intellectual disability are supported to overcome the types of barriers analysed here through developing personalised responses for their individual needs.

Tables

Table 1: Profile of study sample at wave 1 and wave 3

	Wave 1 %	Wave 3 %
Gender (n=609)		
Male	44.2	44.2
Female	55.8	55.8
Age (n=609)		
40-49 years	41.7	11.8
50-64 years	45.6	62.6
65+ years	12.6	25.5
Level of intellectual disability (n=561)		
Mild	24.8	24.8
Moderate	46.2	46.2
Severe/profound	29.1	29.1
Type of residence (n=606)		
Independent/family	17.5	15.6
Community group home	37.5	40.4
Congregated	45.0	44.0

Table 2: Measures used

Measure	Response categories
SP9. Do you experience any difficulties participating in social activities outside your home?	Yes; No
What makes it difficult for you? (Select all that apply)	Health considerations or physically unable; Need someone's assistance; Need specialised aids or equipment that you do not have; Transport services are inadequate or not accessible; Service facilities are not accessible; Not allowed to go; Have no one to go with; Lack of local facilities or suitable activities; Unfriendly or negative attitudes towards you; You are self-conscious of your intellectual disability; Don't have enough money; Don't have enough time; Don't like social activities Getting too old; Family and friends' residence not accessible to you; Communication/language problems; Other (please specify)
SP11. Do you experience any difficulty getting around your community (e.g. using zebra crossings, using traffic lights etc.)?	Yes; No; NA – don't travel around my community
What causes you difficulty? (Select all that apply)	Footpaths design and surfaces; Lack of street crossings; Problems with signs (e.g. size and colour); Getting access to recreational areas; Feeling unsafe; Other (please specify)

Table 3. What makes it difficult for you to participate in social activities outside your home? (n=609)

Difficulty	**Wave 1 %**	**Wave 3 %**
Need someone's assistance	32.2	37.8
Health considerations or physically unable	15.9	26.6
Communication/language problems	14.1	14.8
Not able to read signs and timetables[1]	n/a	11
Transport services are inadequate or not accessible	6.9	6.1
Don't like social activities	3.1	5.6
Need specialised aids or equipment that you do not have	4.3	3.0
Service facilities are not accessible	2.1	2.1
Getting too old	0.5	2.0
Have no one to go with	5.6	1.8
Lack of local facilities or suitable activities	2.6	1.5
Unfriendly or negative attitudes towards you	1.3	0.8
You are self-conscious of your intellectual disability	1.3	0.7
Don't have enough money	0.8	0.7
Not allowed to go	0.2	0.3
Family and friends' residence not accessible to you	1.1	0.2
Don't have enough time	1.8	0
Other (please specify)	25.8	12.5

[1] Added in Wave 3

Table 4. Bivariate associations for difficulty participating in social activities outside the home

	% Difficulty participating in social activities outside the home[2]
Age	(n=596, p<0.01)
Age 48-64	52.3
Age 65+	64.9
Gender	(n=596, p<0.05)
Male	51.1
Female	59.0
Level of intellectual disability	(n=549, p<0.001)
Mild	37.6
Moderate	56.1
Severe-Profound	73.0
Type of Residence	(n=596, p<0.001)
Independent/Family	35.5
Community Group Home	47.3
Congregated	70.1
Health Rating	(n=592, p<0.001)
Good-Excellent	52.4
Fair-Poor	73.3
Mental Health Rating	n=580, p<0.001)
Good-Excellent	49.9
Fair-Poor	74.0
Family Contact	(n=568, p<0.001)
Weekly	48.4
Monthly	49.6
< Monthly	67.7
Have a Best Friend	(n=550, p<0.01)
Yes	48.4
No	60.1
Community Belonging	(n=574, p<0.001)
Yes	47.8
No	81.1

[2] Numbers (n) represent how many of the 609 participants answered both questions. Higher missing rates are explained by some participants having unverified level of intellectual disability (Level of Intellectual Disability); and some participants responding in the negative to preceding filter questions (Have a Best Friend – filtered by 'Do you have friends?') (Family Contact – filtered by 'Do you have family?')

Table 5. Logistic regression for difficulty participating in social activities outside the home

	No Difficulty Participating in Social Activities	
	Odds Ratio (95% CI)	p-value
Gender		
Female	1.0	
Male	**1.97 (1.29-3.01)**	**0.002**
Level of ID		
Severe-Profound	1.0	
Moderate	**1.73 (1.02-2.96)**	**0.044**
Mild	**3.24 (1.72-6.10)**	**<0.001**
Type of Residence		
Congregated	1.0	
Community Group Home	**1.61 (1.02-2.57)**	**0.043**
Independent/Family	1.73 (0.90-3.36)	0.103
Mental Health		
Fair-Poor	1.0	
Good-Excellent	**1.88 (1.09-3.24)**	**0.023**
Contact with Family		
< Monthly	1.0	
Monthly	**2.11 (1.18-3.77)**	**0.012**
Weekly	1.02 (0.62-1.69)	0.93
Community Belonging		
No	1.0	
Yes	**2.63 (1.45-4.80)**	**0.002**
Nagelkerke r^2=0.24, n=456		
p<0.05 is significant. Not significant: Age; Physical Health; Have a best friend.		

Table 6. What causes you difficulty getting around the community? (n=609)

Difficulty	Wave 1 %	Wave 3 %
Footpaths design and surfaces	12.5	11.7
Problems with signs (e.g., size and colour)	11	8.5
Feeling unsafe	9.7	5.1
Lack of street crossings	9	4.4
Getting access to recreational areas	4.1	2.3
Other	19.7	15.6

Table 7. Bivariate associations for difficulty getting around the community

	Difficulty Getting Around Community		
	Yes %	**No %**	**Not Applicable %**
Age (n=569, p<0.001)			
Age 48-64	31.7	46.3	22.0
Age 65+	33.5	23.9	42.6
Gender (n=596, p=0.07)			
Male	34.1	43.3	22.6
Female	30.7	38.2	31.0
Level of ID (n=548, p<0.001)			
Mild	21.5	65.2	13.3
Moderate	34.9	36.9	28.2
Severe-Profound	40.4	22.4	37.3
Type of Residence (n=596, p<0.001)			
Independent/Family	20.2	68.1	11.7
Community Group Home	33.1	46.7	20.2
Congregated	35.8	24.6	39.6
Health Rating (n=592, p<0.001)			
Good-Excellent	30.8	43.8	25.4
Fair-Poor	40.0	20.0	40.0
Mental Health Rating (n=580, p<0.01)			
Good-Excellent	30.2	44.3	25.5
Fair-Poor	38.0	26.4	35.7
Family Contact (n=569, p<0.001)			
Weekly	26.7	52.2	21.1
Monthly	36.4	37.2	26.4
< Monthly	36.8	29.5	33.7
Have a Best Friend (n=550, p<0.01)			
Yes	31.7	48.1	20.2
No	32.8	34.9	32.4
Community Belonging (n=573, p<0.001)			
Yes	32.1	47.8	20.1
No	32.2	14.9	52.9

Table 8. Logistic regression for difficulty getting around one's local community

	No Difficulty Getting Around Local Community	
	Odds Ratio (95% CI)	p-value
Age		
65+ years	1.0	
48-64 years	**2.15 (1.24-3.71)**	**0.006**
Level of ID		
Severe-Profound	1.0	
Moderate	1.56 (0.88-2.75)	0.127
Mild	**4.85 (2.51-9.35)**	**<0.001**
Type of Residence		
Congregated	1.0	
Community Group Home	**1.68 (1.03-2.74)**	**0.036**
Independent/Family	**2.94 (1.47-5.88)**	**0.002**
Physical Health		
Fair-Poor	1.0	
Good-Excellent	**2.56 (1.25-5.25)**	**0.01**
Community Belonging		
No	1.0	
Yes	**2.10 (1.10-3.98)**	**0.024**

Nagelkerke r^2=0.31, n=455, p<0.05 is significant.
Not significant: Gender; Mental health; Family contact; Having a best friend.

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